

14 OVERVIEW

Keywords can be subdivided into *functions*, which return a value, and *commands*, which do not. In practice you use functions and commands together, often using functions as if they were commands, ignoring the values they return.

This chapter lists all the keywords, grouped according to their purpose. Use this chapter if you know what you'd like to do, but not which function or command will do it.

The chapter which follows this one lists the keywords alphabetically, with explanations and full specifications.

PROGRAM CONTROL

Loops, branches, jumps

Repeat a set of instructions	DO...UNTIL, WHILE...ENDW
Do either one set of instructions or another set, or another, or another...	IF...ENDIF
Go...	
...to a specified label	GOTO
...to one of a list of labels	VECTOR...ENDV
...to the end/start of a repeating set of instructions	BREAK, CONTINUE
...back to the calling procedure	RETURN
End the program	STOP

Error handling

Raise an error	RAISE
Put an explanatory comment in your program	REM
Declare an error-handler	ONERR...ONERR OFF
Let the program continue after an error	TRAP
After an error, find out what the error was	ERR, ERR\$
Î After an error, find out what the extended error message was	ERRX\$

SCREEN AND KEYBOARD CONTROL

Display a string to be edited and get a value from the keyboard	EDIT
Get a value from the keyboard	INPUT
Display text, numbers etc.	PRINT
Set screen update method	gUPDATE
Pause...	
...for a number of seconds	PAUSE
...until a key is pressed	GET, GET\$
Position or hide the cursor	AT, CURSOR
Clear the text window	CLS
Sound the buzzer	BEEP
Set the size/position of the text window	SCREEN
Get information on the text window	SCREENINFO
Set text window font and style	FONT, STYLE
Find out which key was pressed, if any	KEY, KEY\$, GET, GET\$
Find out what combination of modifiers was pressed	KMOD
Disable/enable stopping from a running program	ESCAPE OFF/ON
Turn the Psion off	OFF

FILES

General file management

Copy a file	COPY
Delete or rename a file	DELETE, RENAME
Check to see if a certain file exists	EXIST
Find out what files there are	DIR\$

OPL procedures and modules

Ì Set up a procedure cache	CACHE
Load an OPL module file so you can use the procedures in it	LOADM
Remove a module from memory	UNLOADM
Î Include a file containing constant definitions and procedure prototypes	INCLUDE
Î Cause a error to be raised by the translator if a procedure or variable is used before it is declared	DECLARE EXTERNAL
Î Declare a procedure or variable as external	EXTERNAL

Data files and databases

Create a new data file, databse or table	CREATE
OPEN or CLOSE a data file, database or table	OPEN, OPENR, CLOSE
Î Delete a table from a database	DELETE
Use a different data file that has been opened	USE
Ì Copy a data file, optionally appending to another data file, and removing deleted records	COMPRESS

Once a data file has been OPENed, you can:

Make a new record	APPEND
Change a record	UPDATE
Search for those records which contain a certain string	FIND, FINDFIELD
Erase a record	ERASE
Move to a different record	FIRST, LAST, NEXT, BACK, POSITION
Count the records	COUNT
Find whether you're at the end of the file yet	EOF
Find the current record number	POS
Ì Find the number of bytes used by the current record	RECSIZE

↑ Begin a transaction	BEGINTRANS
↑ Commit a transaction	COMMITTRANS
↑ Find out whether the current view is in transaction	INTRANS
↑ Cancel the transaction	ROLLBACK
↑ Insert a bookmark	BOOKMARK
↑ Goto a bookmark	GOTOMARK
↑ Delete a bookmark	KILLMARK
↑ Insert a new blank record	INSERT
↑ Modify a record	MODIFY
↑ Make changes to a database permanent	PUT
↑ Cancel changes made to a database	CANCEL
↑ Compact a database (see COMPRESS)	COMPACT

Managing directories

Create directory	MKDIR
Set current directory	SETPATH
Remove directory	RMDIR

MEMORY

Declare variables	GLOBAL, LOCAL
↑ Declare a constant	CONST
Find how much free memory there is on a device	SPACE

PRINTING

Specify a device or file to print to	LOPEN
Close the print device or file opened with LOPEN	LCLOSE
Print to a device or file	LPRINT

NUMBERS

Trigonometry

Trig functions	COS, SIN, TAN, ACOS, ASIN, ATAN
Convert between degrees and radians	RAD, DEG

Other functions

Raise e to a power	EXP
Logarithms	LN, LOG

Pi as a constant	PI
Square root	SQR
Use random numbers	RND, RANDOMIZE
Unsigned integer/pointer arithmetic (in the 64K limit)	UADD, USUB

Lists of numbers

Find the greatest or smallest value in the list	MAX, MIN
Average the list	MEAN
Add up the list	SUM
Find the standard deviation or variance	STD, VAR

Changing the format of numbers

Knock the minus sign off a number	ABS, IABS
Take whole number, removing any fractional part	INT, INTF
Convert...	
...an integer into floating-point	FLT
...an integer into a hexadecimal string	HEX\$
...a number into a string	FIX\$, GEN\$ SCI\$, NUM\$
...a string into a number	EVAL, VAL

STRINGS

Copy characters from a string	LEFT\$, MID\$, RIGHT\$
Repeat a string	REPT\$
Make a string upper or lower case	UPPER\$, LOWER\$
Find out...	
...how long a string is	LEN
...the character code of the first character of a string	ASC
...where a certain string is within a string	LOC
Convert...	
... a string of digits to a number	VAL
...a number to a string	FIX\$, GEN\$ SCI\$, NUM\$
Get the character with a certain character code	CHR\$

DATE AND TIME

Find out the current date and time...	
...as a string	DATIM\$
...just the current time	SECOND, MINUTE, HOUR
...just the current date	DAY, MONTH, YEAR
Find out...	
...the number of days between two dates	DAYS
...what day of the week, or what week number, a certain date falls in	DOW, WEEK

Express...

...1-12 as the name of a month

MONTH\$

...1-7 as a day of the week

DAYNAME\$

Convert between seconds and dates

DATETOSECS,
SECSTODATE

Î Convert between days and dates

DAYSTODATE

GRAPHICS

Drawing commands

Set current position

gAT, gMOVE

Î Set current pen width

gSETPENWIDTH

Draw a line

gLINEBY, gLINETO

Draw a sequence of lines

gPOLY

Î Draw a circle

gCIRCLE

Î Draw an ellipse

gELLIPSE

Draw a rectangle

gBOX

Draw a border

gBORDER, gXBORDER

Fill a rectangle

gFILL

Invert a rectangle

gINVERT

Scroll a rectangle

gSCROLL

Get current position

gX, gY

Display a running clock

gCLOCK

Draw a 3-D button (key)

gBUTTON

Î Draw a lozenge

gDRAWOBJECT

Displaying graphics text

Display a list of expressions

gPRINT

Display text in a cleared box

gPRINTB

Display text neatly clipped

gPRINTCLIP

Find width required by text

gTWIDTH

Display text underlined/highlighted

gXPRINT

Setting styles

Set graphics to set / clear / invert pixels

gGMODE

Set text to set / clear / invert / replace pixels

gTMODE

Set font to use

gFONT

Load and unload user-defined fonts

gLOADFONT,
gUNLOADFONT

Set text to bold / underline / inverse / double / mono / italic

gSTYLE

Windows and bitmaps

Create a new window	gCREATE
Set position and/or size of a window	gSETWIN
Set order to show windows	gORDER
Get order of a window	gRANK
Set window visible / invisible	gVISIBLE
Get screen position of a window	gORIGINX, gORIGINY
Create a bitmap	gCREATEBIT
Load a bitmap from file	gLOADBIT
Clear a window / bitmap	gCLS
Save window / bitmap to bitmap file	gSAVEBIT
Close down a window / bitmap	gCLOSE
Set which window / bitmap to use	gUSE
Î Set foreground colour of current window	gCOLOR
Î Swap between grey and black pens	gGREY
Î Set grey on/off in a window	gGREY
Î Set colour mode of default window	DEFAULTWIN
Î Enable grey in default window	DEFAULTWIN
Fill an area with repetitions of another window / bitmap	gPATT
Copy an area from one window / bitmap to another	gCOPY
Read data back from a window / bitmap	gPEEKLINE
Get ID number of a window / bitmap	gIDENTITY
Get size of a window / bitmap	gWIDTH, gHEIGHT
Î Get status information about a drawable and about the cursor	gINFO
Î Get status information about a drawable and about the cursor	gINFO32

Î Sprites

Create a sprite	CREATESPRITE
Define bitmap-sets for a sprite	APPENDSPRITE, CHANGESPRITE
Draw a sprite	DRAWSPRITE
Set a sprite's position	POSSPRITE
Close a sprite	CLOSESPRITE

MENUS

Start a new set of menus	mINIT
Define a menu	mCARD

Î Define a cascade for a menu	mCASC
Display menus	MENU
Î Define a popup menu	mPOPUP
DIALOGS	
Start a new dialog	dINIT
Position a dialog	dPOSITION
Define text for a dialog	dTEXT
Define an edit box for a dialog	dEDIT
Î Defines a multi-line edit box for a dialog	dEDITMULTI
Define a secret edit box for a dialog	dXINPUT
Define a filename edit box for a dialog	dFILE
Define a choice list for a dialog	dCHOICE
Î Defines an item with a checkbox for a dialog	dCHECKBOX
Define a numeric edit box for a dialog	dFLOAT, dLONG
Define a date or time edit box for a dialog	dDATE, dTIME
Define exit keys for a dialog	dBUTTONS
Display a dialog	DIALOG
Display a simple ‘alert’ dialog	ALERT
SERIES 3C AND SIENA STATUS WINDOW	
Display/hide status window	STATUSWIN
Get status window information	STATWININFO
Set a program’s name	SETNAME
Initialise a  list	DIAMINIT
Position  on a  list	DIAMPOS
SCREEN MESSAGES	
Display information messages	GIPRINT
Display ‘busy’ messages	BUSY
OPL APPLICATIONS	
Define an OPA	APP...ENDA
Declares an OPAs icon	ICON
Î Give an OPAs caption in the given language	CAPTION
Î Specify whether an OPA is document-based	FLAGS
Î Set the type of an OPA	TYPE
Î Give the file extension used by an OPA	EXT

Ì Give the directory to use for an OPA's files	PATH
Mark an OPA as locked or unlocked	LOCK
ADVANCED USE	
Ì Run machine code	USR, USR\$
Find out where a certain variable is in memory	ADDR
Store a value in a specific place in memory	POKE commands
Find out the value stored at a certain place in memory	PEEK commands
Open any type of file	IOOPEN
Read from a file opened with IOOPEN	IOREAD
Write to a file opened with IOOPEN	IOWRITE
Close a file opened with IOOPEN	IOCLOSE
Position within a file opened with IOOPEN	IOSEEK
<i>Keywords which provide low-level access to the Psion</i>	
Ì Call an operating system service	CALL, OS
Perform an asynchronous I/O function	IOA, IOC
Cancel an asynchronous I/O function	IOCANCEL
Wait for completion of a function performed by IOA or IOC	IOWAIT, IOWAITSTAT,
Î Wait for completion an asynchronous OPX procedure	IOWAITSTAT32
Signal completion of an I/O function	IOSIGNAL
Ensure an asynchronous handler runs	IOYIELD
Perform a synchronous I/O function	IOW
Perform an asynchronous keyboard read	KEYA
Cancel a KEYA	KEYC
Get command line information	CMD\$, GETCMD\$
Î Set a file to be a document	SETDOC
Î Get the name of the current document	GETDOC\$
Parse a full file specification	PARSES
Check for system events	GETEVENT, TESTEVENT
Î Check for system and pointer events	GETEVENT32, GETEVENT32A
Î Filter pointer events out or reinstate them	POINTERFILTER
Ì Get system-level info on data files	ODBINFO
Ì Load/link a DYLIB	LOADLIB, LINKLIB
Ì Unload a DYLIB	UNLOADLIB

Ì Find category handles	FINDLIB, GETLIBH
Ì Create new objects	NEWOBJ, NEWOBJH
Ì Send a message to an object	SEND, ENTERSEND, ENTERSEND0
Allocate a heap cell	ALLOC
Free an allocated cell	FREEALLOC
Change size of allocated cell	REALLOC
Insert or delete section of cell	ADJUSTALLOC
Find length of allocated cell	LENALLOC
Ì Remove returned procedures from a cache	CACHETIDY
Ì Read cache index header	CACHEHDR
Ì Read cache index record	CACHEREC
Î Set flags (mainly for Series 3c compatibility)	SETFLAGS
Î Clears flags set by SETFLAGS	CLEARFLAGS